

REMARKS

Claims 21-40 remain in this application. Claims 21, 28, and 30 have been amended to overcome their rejection under 35 USC 112, second paragraph.

In the rejection of claims 21-32, 34, and 40 under 35 USC § 103(a), the examiner states that the Ruoff et al. reference shows the evaporating device, including pump (21), control unit (24), and monitoring device (28) but lacks the metering pump conducting fuel to the evaporating device where there is no further control structure between the metering pump and the evaporating device.

It is again argued that claim 21 specifies the use of two pumps, one of which **precisely meters** the raw fuel which goes to the evaporating device. This pump is recited in claim 21 to be a “metering pump whose **rpm is regulated** by means of **the control unit (8)** so as to precisely meter the quantity of raw fuel which is delivered to the evaporating device.” Clearly Ruoff et al. does not have a teaching of **the control unit (8)** as recited in claim 21; in particular, Ruoff et al. do not have any teaching of the function of the control unit wherein it **precisely controls** the rpm of the metering pump as recited in claim 21.

In contrast to applicants’ operation, pump 21 of Ruoff et al. is operated at a constant rpm, see column 5 line 2. The metering in Ruoff et al. is done by a metering valve 22, as described at column 4 lines 61, 62, 66, column 5 line 4-6, and various other locations in Ruoff et al. Moreover, at column 4 lines 60-65 Ruoff et al. recite that pump 21 not only supplies metering valve 22, but also supplies four metering valves 23, as shown in figure 2. At column 5, lines 1-6, Ruoff et al. go on to state that pump 21 is “operated at a constant rpm whereby a backflow into

the supply tank 20 takes place via bypass 25 and pressure controller 26.” Thus in Ruoff et al. pump 21 does not, and clearly cannot, precisely meter the amount of fuel which is passed to the evaporating unit, and there is no control unit which can cause the metering pump to precisely control the amount of fuel. In Ruoff et al., between the pump 21 and the evaporator 4 is a metering valve 22 which does the precise metering. Further, pump 21 must also supply four other valves 23, as well as supply bypass line 25. Ruoff et al. simply does not have a control unit which regulates the metering pump to precisely control the amount of fuel passed to the evaporator unit.

Thus clearly Ruoff et al. neither has nor teaches the structure which is recited in claim 21.

The examiner has pointed out that in column 3, lines 18-23 of Ruoff et al. indicate that the pump (21) is controllable to provide sufficient fuel, but not oversupply fuel so that energy is not wasted. However, this is not a teaching of a pump with the above features being controlled by a control unit to precisely control the amount of fuel as specified in claim 21. If the entire disclosure of Ruoff et al. is considered, it becomes clear that Ruoff et al. disclose a situation in which pump 21 is operated to supply slightly more fuel than is required by the evaporating device, along with supplying slightly more fuel than is required by the devices fed by additional metering valves 23, and pump 21 must also feed sufficient fuel to the bypass line 25 so that pressure controller 26 can maintain a constant pressure for at least 5 metering valves.

The structure of Ruoff et al. is not the same as a control unit which controls the rpm of a metering pump to precisely meter the fuel supplied to the evaporating unit.

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Ruoff et al. provide more than enough indications that they had no intention whatsoever that their device should use a metering pump and its control unit as the **precise** control of the fuel being delivered to the evaporating unit. This clearly is contrary to the limitations which are recited in the claims of this application. This is perhaps most clearly evidenced in column 6, lines 42-44 of Ruoff et al. where it is stated "However, what remains essential is that the pump 21 need no longer be configured as a metering pump because of the use of a metering pump 21 in combination with a metering valve 22."

The teaching of Ruoff et al. is clearly to avoid using a metering pump to control the amount of fuel supplied to the evaporator.

The examiner relies on the Riple reference to show an apparatus for precisely metering a fluid flow. The examiner states that the metering pump of the Riple reference and the metering valve of the Ruoff et al. reference are interchangeable, as is recognized in the art, as evidenced in the art (see Andrews et al., column 7, lines 62 thru column 8, line 4). The examiner continues by saying that it would have been obvious to replace the metering valve of the Ruoff et al. reference with the metering pump of the Riple reference as such a modification would amount to nothing more than a simple substitution of one known element for another.

However, the examiner's wording of the rejection, particularly the phrases "as recognized by" and "as evidenced by" is not entirely clear. Is the examiner using the Andrews et al. reference as part of the rejection? Clarification on this aspect of the rejection is requested.

Applicants do not believe that the Ruoff et al., Riple, and Andrews et al. references can properly be combined to make the claimed invention obvious.

The examiner provides no motivation to combine the references, other than pointing to Andrews et al. as evidence that metering valves and metering pumps are equivalent. But considering the teaching of Andrews et al., it is clear that this reference cannot properly be used as evidence of their interchangeability, at least not in an apparatus which requires precise metering of the fuel.

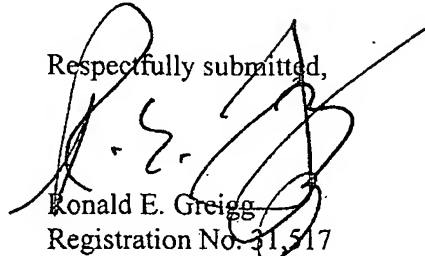
The reason that Andrews et al. cannot properly be used to show interchangeability of metering pump and a metering valve in an environment which requires accurate control of the fluid, is that Andrews et al. never accurately control how much fluid is used. Andrews et al. meter a quantity of water in its liquid state, then use the water in its vapor state. It is hard to imagine that this arrangement could supply an accurately measured quantity of water vapor.

But even stronger evidence against Andrews et al. comes from the fact that Andrews et al. provide baffles 36 which allow a non-measured amount of water in its liquid state to flow back to the chamber 20. With water flowing back to chamber 20 in a liquid state, it is probable that more water, unmeasured, flows back than goes forward in transfer line 38. Thus it becomes clear that Andrews et al. cannot possibly accurately control the amount of water vapor used. And it is an absolute certainty that Andrews et al. cannot accurately control the amount of water vapor used in their system on a moment to moment basis, since an unmeasured amount of water is allowed to flow back to the chamber 20.

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For all of the above reasons, taken singly or in combination with one other, entry of this amendment and allowance of the claims are courteously solicited.

Respectfully submitted,



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